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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,269	09/27/2004	Mahito Kawano	TOR-04-1238	5364

35811 7590 03/17/2009
IP GROUP OF DLA PIPER US LLP
ONE LIBERTY PLACE
1650 MARKET ST, SUITE 4900
PHILADELPHIA, PA 19103

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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03/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,269	Applicant(s) KAWANO ET AL.	
	Examiner ALICIA CHEVALIER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RESPONSE TO AMENDMENT

1. Claims 1-6 and 10-21 are pending in the application, claims 7-9 have been cancelled.
2. Amendments to the claims, filed on January 7, 2009, have been entered in the above-identified application.

REJECTIONS

3. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Objections

4. Claim 10 is objected to because of the following informalities: Claim 10 is dependent on cancelled claim 7. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. Claims 1-6 and 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. (U.S. Patent No. 6,064,524) in view of Yamada et al. (U.S. Patent No. 6,051,665) and Murata et al. (U.S. Patent No. 5,886,819).

Regarding Applicant's claims 1, 2, 11, 12 and 18-21, Oka discloses a multilayer film (*optical functional materials, title*) comprising a substrate film (a) (*transparent substrate, col. 8, line 43 and figure 15a, reference #11*), a hard coat layer (b) containing a (meth)acrylate compound (*clear hard coat layer, col. 18, lines 1 and 34 and figure 15a, reference #16*), an

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electrically conductive layer (c) containing electrically conductive particles (*antiglare layer with high refractive index, col. 12, lines 16-30 and figure 15a, reference #12*), and a resin layer (d) (*low refractive index layer, col. 26, lines 6-7 and figure 15a, reference #13*), those three layers being disposed on at least one face of the substrate film (a) (*figure 15 a*). The resin layer (d) has fine irregularities on the surface (*figure 15a*). The surface of the resin layer (d) of the multilayer film has a reflectance of less than 2% (*col. 1, lines 44-45*).

Oka further discloses that the metal particles enhance the high reflective index of the electrically conductive layer (*antiglare layer, col. 11, lines 63-66*), but does not specify the weight percent of particles in the layer. Therefore, exact weight percent of the content of particles is deemed to be a result effective variable with regard to the high index of refraction property. It would require routine experimentation to determine the optimum value of a result effective variable, such as weight percent of content, in the absence of a showing of criticality in the claimed weight percent. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill in the art would want a high weight percent of particles in order to increase the reflective index, which would help reduce glare.

Oka fails to disclose the claimed composition of the resin layer.

Yamada discloses a coating composition with low refractive index which exhibits superior adhesion to various substrate, excellent scratch resistance, and excellent weatherability (*abstract*). The coating composition comprises a fluorine containing copolymer having a vinyl ether in principal chain (*col. 3, lines 29-55*) and silica particles with a particle size of 0.001 to 0.2 μm (*col. 15, lines 23-38*). The composition further comprises a saline coupling agent or a hydrolysate of the agent or a product obtained by subjecting the hydrolysate to reaction that

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meets the formulas of claim 11 (*col. 6, lines 35-67*), a alkoxysilyl group (*col. 9, line 46 through col. 10, line 12*) and a cross-linkable compound (*col. 10, lines 22-24*). The fluorine-containing copolymer contains a fluorine-containing olefin chain with a fluorine content of 30% or more, or 20% to 70%, and contains 10% to 70% of a repeating unit derived from the vinyl ether-containing compound (*col. 6, lines 12-21*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the low refractive index coating composition of Yamada as the low refractive index resin layer of Oka because Yamada's coating composition exhibits superior adhesion to various substrate, excellent scratch resistance, and excellent weatherability.

Oka and Yamada fail to disclose the resin layer having an arithmetic average surface roughness Ra ranging from 0.004 μm to 0.020 μm or a haze of less than 3%.

Murata discloses antiglare material having an arithmetic average surface roughness Ra ranging from 0.03 μm to 0.20 μm (*col. 3, lines 55-57*) or a haze of less than 3% (*col. 4, lines 5-20*). If the Ra is too high a glittering phenomenon occurs and if it is too small there is insufficient antiglare effect. Likewise if the haze is too low it will cause a decrease in the antiglare effect and if it is too high the contrast of the images would be decreased (*col. 3, lines 61-64*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to having have a haze of less than 3% for the resin layer in the combination of Oka and Yamada as taught by Murata in order to insure good visibility through the film.

The exact surface roughness, Ra, of the resin layer is deemed to be a result effective variable with regard to the antiglare effect. It would require routine experimentation to

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determine the optimum value of a result effective variable, such as Ra, in the absence of a showing of criticality in the claimed Ra. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Regarding Applicant's claims 3 and 4, Oka discloses that the substrate contains a polymer containing one selected from the group consisting of the ester, the acetate and the acrylate (*col. 8, lines 43-55*).

Regarding Applicant's claims 5-6, Oka disclose discloses that the electrically conductive layer (c) has a thickness of 0.01 μm to 1.0 μm (*col. 9, lines 63-67*) and contains a metal oxide particles (*col. 12, lines 16-30*).

Regarding Applicant's claims 13-17, the preambles "display film," "display", "display filter," "front protector panel" and "plasma display" are deemed to be statements with regard to the intended use and are not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. in view of Yamada et al. and Murata et al. as applied above, and further in view of Hasuo et al. (U.S. Patent No. 6,716,513).

Oka, Yamada and Murata are relied upon as described above.

Oka, Yamada and Murata fail to disclose the silica particles have two or more particle size distributions.

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Hasuo teaches a material with antifogging properties and antifouling properties (*col. 1, lines 14-20*). The material comprises silica particles with at least two size distributions (*figure 1 and claims 1-4*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use silica particles with at least two size distributions as taught by Hasuo in the combination of Oka, Yamada and Murata in order to improve the antifogging and antifouling properties.

ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments in the response filed January 7, 2009 regarding the previous rejections of record have been carefully considered but are moot due to the new grounds of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
3/18/2009